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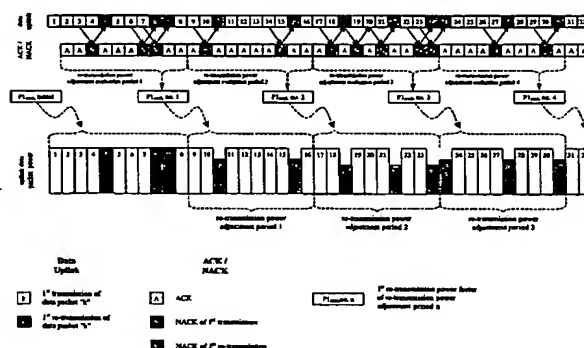
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(54) Title: **METHOD, DEVICE AND SYSTEM FOR DETERMINING A TRANSMISSION POWER FOR ARQ RELATED RE-TRANSMISSIONS**



(57) Abstract: The present invention provides a method, a mobile terminal device and a system for determining a transmission power factor. Further, software tools and computer programs being based on embodiments of the method of the invention are also provided. During an uplink of data between a mobile terminal device and a base station via a code division multiple access (CDMA) system supported by automatic repeat request (ARQ) first transmission containing original data and re-transmissions of different order containing supplementary information are communicated. The *i*-th re-transmissions are based on the automatic repeat request (ARQ). The transmission power factor to be determined is operable with an *i*-th re-transmission. A first and a second error quantity are obtained from an evaluation of status information items received in accordance with the automatic repeat request (ARQ). The first error quantity is equal to a number of ARQ relating *i*-th re-transmissions whereas the second quantity is equal to a number of *i*-th re-transmissions being responded by status information items each containing an ARQ relating non-acknowledgement item. The first error quantity and the second error quantity allow for deriving an *i*-th error ratio and depending on that a transmission power correction factor is calculated. The transmission power factor being operable with *i*-th re-transmissions is determined finally from a current valid transmission power factor and the calculated transmission power correction factor.



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